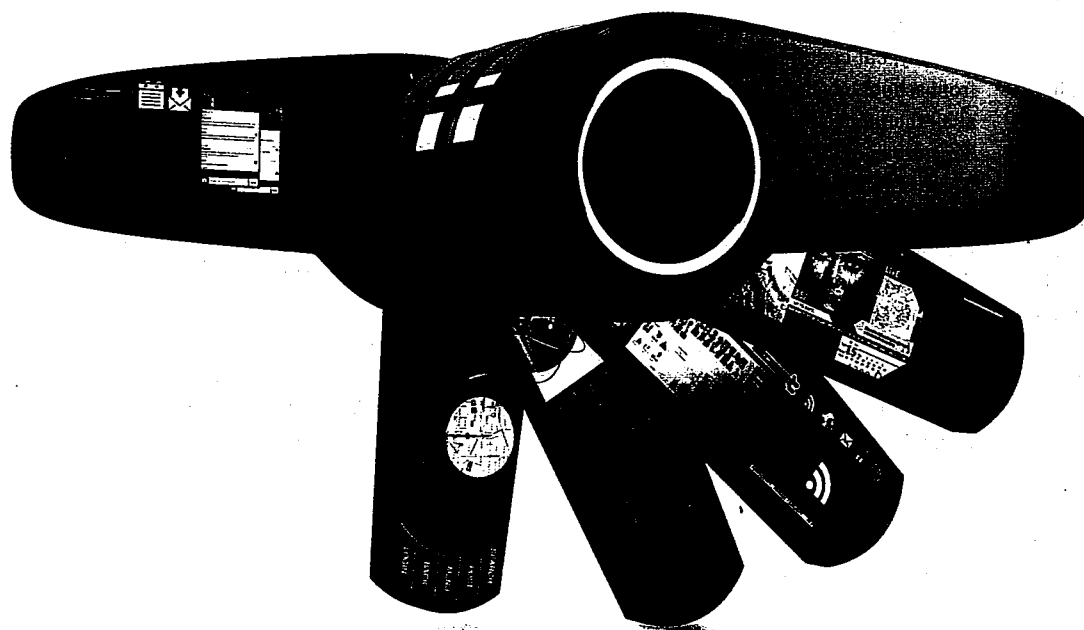


VISION OF THE IDEAL

Educators conjure up the mobile device they believe could change the future of education.

Illustrations by Ryan Etter



Editor's note: *It's been just a couple of years since the first mobile device hit the market. Yet, it is already a foregone conclusion that it will become an indispensable tool for learning in the future. That's why T.H.E. Journal asked a number of educators to let their imaginations go wild and conjure up visions of the future of the mobile device in the classroom. Next month, students share their unique visions of the ideal mobile learning app.*

THE DEVICE WILL FIT IN A POCKET and have multiple inputs to cover any need. It will bear Swiss army knife functionality and have connectivity that works 24/7/365 anywhere, so that it facilitates ease of search and output. It will have very long battery life, be safe for the environment and the end user, and will be so intuitive it will require little to no training. It will be used

for everything, including learning. It will be affordable and paid for by each individual with the option to upgrade as needed, when needed, and will be virtually indestructible.

SALLY BAIR

Consultant, Hegins, PA

Future mobile devices will be interactive with a three-dimensional touchscreen that projects the screen into the air in front of the user for manipulation. These devices will run on a cloud with applications and data stored entirely there. Small in size, measuring only 6 inches by 10 inches and approximately 1 inch thick, these devices will have both WiFi and 4G access, with inherent 16 MB per month included with purchase. One USB port will be included, as well as a headphone jack, HDMI, VGA, and speaker as side features.

STEVE RYAN

Instructional technology coordinator,
social studies teacher
Butler School District 53
Oak Brook, IL

The "Ubique" mobile device is credit card-sized, waterproof, shock-resistant, and indestructible, with long battery life and solar power capability. It will operate all

programs, regardless of operating system, and will connect to the internet anywhere on Earth via providers working under a global service umbrella. Service providers and product manufacturers will provide the device and service free to students and educational institutions in exchange for tax benefits and concessions. In addition to operating standard learning programs, "Ubique" will monitor physical health status and warn users of potential health issues through various input capabilities, such as blood pressure, blood, and diet.

RHONDA LEDUC

Graduate student
University of Illinois
Urbana-Champaign, IL

It will have to be durable, rugged, and portable with about a 5- to 7-inch screen, forward and backward cameras, flash memory, and AV in/out with adapters for various display systems. Keyboards will be

optional for ADA compliance, but voice recognition applications like Dragon Go will be the primary source of data input. Students will become more skilled in oral speaking skills as an indirect result of using voice-recognition software. WiFi connections will be funded through grants and discounted rates by major carriers.

DENNIS IMOTO

Educator
Hawaii Technology Academy
Waipahu, HI

I imagine a tablet-sized device that will be easily manageable and functional, but with a double screen, as if it were a notebook. The screens will also function as solar cells to charge the battery. It should be compatible with every platform for functionality, and it must support any application (no compatibility issues). Students can use the device on or off campus. It will connect through the internet, Bluetooth or 3G.



MANY YEARS DOWN THE ROAD,

I envision a device that isn't mobile per se, but located in every classroom. I'll call it the iDesk. Imagine a glass-top student desk that is like a larger version of an iPad—a touch-screen computer desk connected via WiFi to a school's network. Using cloud computing, students would sit down and log into their desks, where they can respond to teacher prompts, complete and submit work, and connect with other students—all without needing additional computers or mobile devices. As smartphones evolve more into full-function computers, students' mobile devices can be linked to the iDesk. An expensive proposition, and this future is many years away, but that is my vision.

KYLE ROSS

Assistant principal, education services
Chaparral High School
Scottsdale, AZ



IMAGINE A PERSONAL learning environment in the palm of your hand. A solar cell embedded into the cover of the device ensures always-on status and easy transition to various learning environments. A durable clamshell case opens to expose dual touchscreens. Exchangeable hardware modules such as GPS and LED projector provide functionality that benefits students with special needs and will facilitate augmented reality as students explore their world in an amazing way. Built-in cameras allow for videoconferencing and collaboration between students and subject matter experts. Memory card slots and WiFi/WiMax access will support cloud-based file sharing or management.

ALAN LANDEVER

Director, technology services
Fort Leavenworth USD 207
Fort Leavenworth, KS

Students will pay a technology or lease fee.

INPUTS: touchscreen, built-in camera, built-in microphone, USB port, SIM card reader

OUTPUTS: USB, speakers, video and audio outputs

GABRIELA CABRERA

Elementary coordinator
Thomas Jefferson Institute
Mexico City

For K-12 education, the device needs to address the day-to-day stresses of kid use, and the cost needs to come down significantly. The device should be compact and rugged, have extended battery life, be always connected, support adaptive input that is UDL-friendly (touch, keyboards, switches, voice, able to project or expand the screen, etc.), and cost under \$100 and under \$75 for annual connectivity. I'm 100-percent confident that we will get there on the device, and 75-percent confident we will get there on the price.

LEE WILSON

President and CEO
PCI Education
San Antonio

It will be an off-the-shelf smartphone. No change. Mobile learning will be a universally ported app that runs on phones, set-top boxes, PCs, pads, video walls, smart TVs. It will be interactive, multimedia, web-enabled, real-time, self-paced, and scored in real time. It will tie back to a cloud that has archived, certified, curated, cleared-for-use content (like Curriki.org). The app and the content will be free, at least for K-12, because, for children everywhere, we need it to be universally accessible.

SCOTT MCNEALY

Former CEO and co-founder,
Sun Microsystems
Current board chairman, Curriki
Cupertino, CA

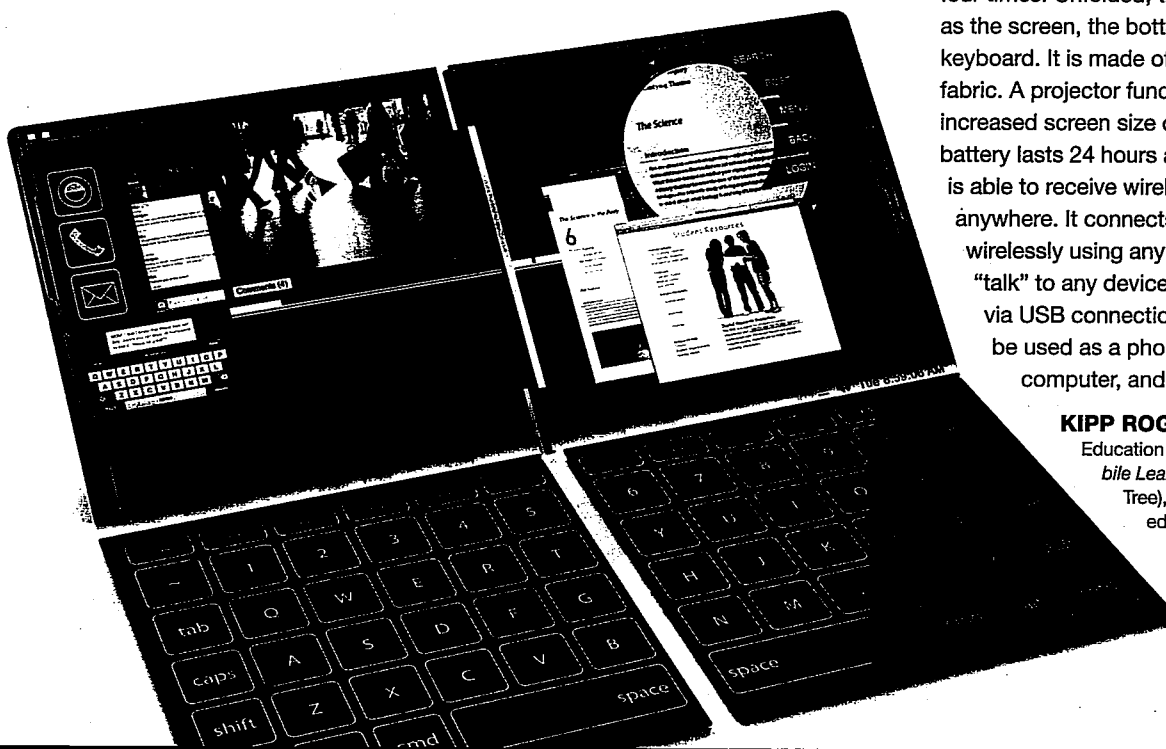
A mobile learning student will be assigned an activity, presented customized information through multimedia sources, and be delivered immediate feedback. The teacher will act as a project manager. For example, a student will receive information about different soil elements through a video, take samples through peripherals attached to a device, and receive immedi-

ate feedback delivered through apps. In the admin app, a teacher might review student feedback, assess results, and determine the best learning for the student. Students will be clustered by skill/task reinforcement. Globally, access to mobile devices will create affordable, content-rich, on-the-go classrooms, leading to accessibility of education in Third World countries.

KAREN SORENSEN

Senior education consultant
and partner
21st Century Education

Smartphones will become learning devices. These devices accomplish tasks like obtaining measurements more efficiently than humans, so utilizing the device to calculate area or volume will replace learning to derive these manually. Research methodologies will be taught, but traditional research projects will be replaced by multimedia compilations that resemble documentary films. Online/device-based tutorials will be utilized more than traditional teachers in classrooms that require buildings and maintenance, offsetting device and communication costs. Stu-



THE IDEAL MOBILE learning device resembles a credit card after being folded four times. Unfolded, the top half serves as the screen, the bottom half as the keyboard. It is made of a pliable titanium fabric. A projector function allows for increased screen size on any surface. The battery lasts 24 hours and [the device] is able to receive wireless signals from anywhere. It connects to the internet wirelessly using any network and can "talk" to any device either wirelessly or via USB connection. The device will be used as a phone, television, PDA, computer, and textbook.

KIPP ROGERS

Education speaker, author of *Mobile Learning Devices* (Solution Tree), director of secondary education, York County School Division, Yorktown, VA

dents who test well or require job-specific knowledge in subjects like math, science, or technology will receive more traditional training, allowing the system to be built and maintained.

MARK PETTIT

Systems administrator
Brophy College Preparatory
Phoenix

The mobile learning device of the future won't be a separate piece of equipment. Rather, mobile learning in the future will be an active part of the student's world. Smartphones, televisions, tablets, in-car telematics and even household appliances will always be connected to the student's academic life. Everything the student does, and everywhere the student interacts, will become a learning opportunity. The only examples given to a student will be real-world examples, because they will always be plugged in, always learning. The future of learning isn't bound to a mobile device; the future of learning is mobile. Learning

will not begin at the schoolhouse door, and it won't end there either.

CALEB JONES

Student experience advocate
Florida Virtual School
Orlando, FL

The learning device of the future is not a device. It is the network; specifically, wireless networks. The FCC recently green-lighted the E-Rate Deployed Ubiquitously (EDU) 2011 Pilot Program. With EDU2011, the FCC authorized up to \$10 million for E-Rate Funding Year 2011 for a pilot program in order for the FCC to assess "the merits and challenges of wireless off-premises connectivity services." The FCC is looking at how they can support wireless connectivity. In the future, more funding for these wireless networks may come from the E-Rate program.

JOHN HARRINGTON

CEO
Funds For Learning
Edmond, OK

Mobility has already changed the way we connect with information, resources, and each other. The question now is how schools and districts can best leverage mobile devices—whatever those devices may be—to instantly enhance all aspects of the educational experience and make learning more personal. Mobile technology customizes the learning experience to better fit students' preferred mode, media, and pace of learning. It helps students connect with courses, content, and each other. It helps share insight on academic progress between teachers, students, and parents, and allows students to create content for assignments directly from devices and more. The future of mobile learning is already here and waiting for us to take advantage—now it's just a matter of activating it.

PATRICK DEVLIN

Vice president of sales
Blackboard Mobile
Washington, DC